# **Report on Bachelor Thesis**

Institute of Economic Studies, Faculty of Social Sciences, Charles University in Prague

Student:	František Čech	
Advisor:	Mgr. Tomáš Václavík	
Title of the thesis:	Natural gas security of supply and distribution in the area of Slovak Republic	

## **OVERALL ASSESSMENT** (provided in English, Czech, or Slovak):

As the author himself claims, the main aim of this thesis is to give an overview about the history and current situtation of the gas industry in the Slovak Republic. The thesis consists of six theoretical (1-6) chapters and one analytical (7). In the theoretical parts, the author provides us with information about the history and current situation of the Slovak gas industry. He also describes the legislative framework of the gas business in the Slovak Rep. and discusses the role of natural gas storages in the security of supplies. The last theoretical chapter is devoted to the gas crisis at the beginning of 2009.

The analytical chapter provides us with a model of gas storage usage and its contribution to the security of supplies. Since there is only limited data about the natural gas market in the Slovak Republic available, the author models the usage of so called "virtual gas storage" with respect to several strong (and simplified) assumptions. The main finding of this simplified model is that the Slovak Rep. could have been supplied during the gas crisis in 2009 with natural gas from storages for 115 days, that does not correspond much to reality.

Beside some parts, where the author goes in my opinion too much into detail (e.g. technical information about pipelines or storages or discussion of impacts of gas crisis on 16 european countries), the thesis is quite well structured. In the theoretical parts is provided comprehensive information about the Slovak gas market that consequently serves as a background for the analytical part discussing potential role of gas storages in the security of gas supplies.

Except for several smaller inaccuracies (e.g. on p. 22: market share of RWE Gas Slovensko doesn't mean contracting 25% of SPP customers, but 25% of volumes in a given market segment), there are two main things that unnecessarily decrease the value added of the work.

First, author's work with references is not ideal. I would suggest to use much more citations and references throughout the text. It is not exceptional that the author provides us with some specific data (e.g. p. 47: "Odhadované straty v slovenskom hospodárstve sú na úrovni jednej miliardy eur.") without the source of the information. Moreover, it would be beneficial to use references or data from other literature (even from other countries – potentially from the Czech Rep.) to support his general claims e.g. about hourly – yearly differences in off-takes of gas on p. 34 etc.

Second, the assumptions made in the seventh chapter are unnecessarily too simplified and therefore do not correspond to the reality, that is obviously one of the main reasons for the final result of his model.

Crucial assumption for the results (p. 60) is stable daily natural gas consumption between October and March. Although there is only limited data available for the Slovak market, the author should have reflected generally huge difference between gas off-takes in October and e.g. January in the thesis (e.g. by using as an approximation the development of mothly offtakes in the Czech Rep. or other country, that are available online) that would be much more accurate that stable daily offtakes and would definitely heavily influence the results.

Another important simplification consists in applied extractive curves and storages' maintanance gas volumes. I would prefer some references to literature and also data about maintanance volumes of natural gas storages in reality (doesn't have to be for Slovakia). Is it possible that applied levels of 20 or even 50% (as used for Bojanovice, which seems to me too high) could somewhere correspond to reality? Is it possible to find any data about maintanance volumes in storages (not necessarily for Slovakia)?

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In my opinion, the author could have tried to find more sophisticated assumptions for the model that would definitely lead to big changes in the results. In the case of application of strong simplifications, it should be provided also with the reasoning for author's choice and eventually with some references.

Despite my comments, the thesis fulfills all demands for a Bachelor's thesis and thus I recommend the thesis for a defense. My grading of the thesis is a B grade (good, velmi dobře, 2).

### **SUMMARY OF POINTS AWARDED** (for details, see below):

CATEGORY		POINTS
Literature	(max. 20 points)	13
Methods	(max. 30 points)	21
Contribution	(max. 30 points)	22
Manuscript Form	(max. 20 points)	18
TOTAL POINTS	(max. 100 points)	74
GRADE	(1-2-3-4)	2

NAME OF THE REFEREE:	Tomáš Vyležík
DATE OF EVALUATION:	10.6.2010

Referee Signature

#### **EXPLANATION OF CATEGORIES AND SCALE:**

**LITERATURE REVIEW:** The thesis demonstrates author's full understanding and command of recent literature. The author quotes relevant literature in a proper way.

Strong Average Weak 20 10 0

**METHODS:** The tools used are relevant to the research question being investigated, and adequate to the author's level of studies. The thesis topic is comprehensively analyzed.

Strong Average Weak 30 15 0

**CONTRIBUTION:** The author presents original ideas on the topic demonstrating critical thinking and ability to draw conclusions based on the knowledge of relevant theory and empirics. There is a distinct value added of the thesis.

Strong Average Weak 30 15 0

**MANUSCRIPT FORM:** The thesis is well structured. The student uses appropriate language and style, including academic format for graphs and tables. The text effectively refers to graphs and tables and disposes with a complete bibliography.

Strong Average Weak 20 10 0

#### Overall grading:

TOTAL POINTS	GRADE		
81 – 100	1	= excellent	= výborně
61 – 80	2	= good	= velmi dobře
41 – 60	3	= satisfactory	= dobře
0 – 40	4	= fail	= nedoporučuji k obhajobě